

## Prototyping a Rangeland Decision Support System, Phase II

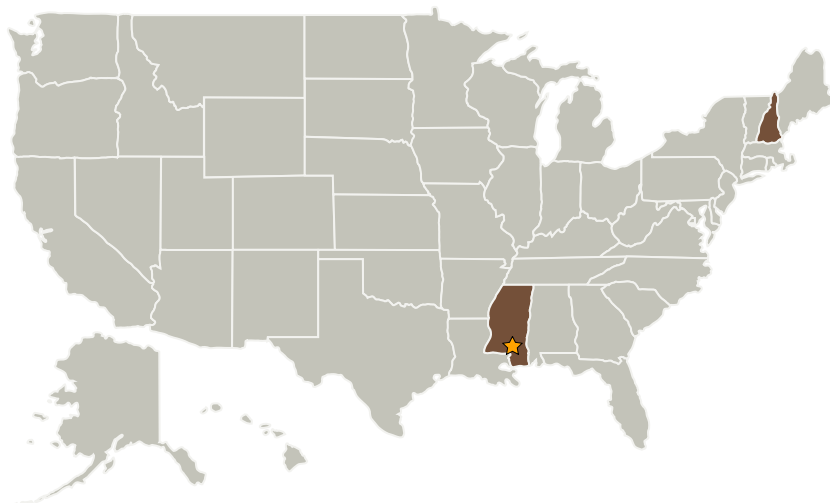
Completed Technology Project (2006 - 2008)



## Project Introduction

This proposal is submitted under the Innovative Tools and Techniques Supporting the Practical Uses of Earth Science Observations topic. We seek to create a prototype rangeland decision support system that links remote sensing based rangeland products, a soil biogeochemical model and web-based tools for data mining, data management and product visualization. The resulting decision support system will be unique and innovative by not only providing operational remote sensing observations of rangeland condition, but also web-based tools that utilize these observations to provide critical information on soil fertility/productivity, greenhouse gas emissions, and potential erosion and sedimentation. Our Rangeland Decision Support System (RDSS) will build off of existing RANGES and DNDC tools. Landsat and MODIS prototype processing algorithms for rangeland condition (height, forage production, fractional cover) have been developed under the previous RANGES project and Phase I. The result of this Phase II project will be a series of web data management tools and a prototype RDSS for Walnut Gulch Experimental Watershed and Santa Rita Experimental Range regions in Arizona.

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Stennis Space Center (SSC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
Applied Geosolutions, LLC	Supporting Organization	Industry	Durham, New Hampshire

Primary U.S. Work Locations	
Mississippi	New Hampshire

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

## Technology Areas

**Primary:**

- TX11 Software, Modeling, Simulation, and Information Processing
  - └ TX11.5 Mission Architecture, Systems Analysis and Concept Development
    - └ TX11.5.2 Tools and Methodologies for Performing Systems Analysis